

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Wei *et al.*

Appl. No.: To Be Assigned
(Divisional of 09/006,353, filed January 13,
1988)

Filed: Herewith

For: **Tumor Necrosis Factor Receptor 5**

Art Unit: To Be Assigned

Examiner: To Be Assigned

Atty. Docket: 1488.1280006/EKS/EJH

Preliminary Amendment

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In advance of prosecution, please amend the application as follows.

In the Claims

Please cancel claims 1-22 without prejudice to or disclaimer of the subject matter thereof.

Please add the following claims 23-123:

-- 23. An isolated polypeptide comprising a first amino acid sequence at least 90% identical to a second amino acid sequence selected from the group consisting of:

- (a) amino acids -26 to 233 of SEQ ID NO:2;
- (b) amino acids -25 to 233 SEQ ID NO2; and
- (c) amino acids 1 to 233 SEQ ID NO2.

24. The polypeptide of claim 23, wherein said second amino acid sequence is (a).

25. The polypeptide of claim 24, wherein said first amino acid sequence is at least 95% identical to said second amino acid sequence.

26. The polypeptide of claim 25, wherein said first amino acid sequence is (a).

27. The polypeptide of claim 23, wherein said second amino acid sequence is (b).

28. The polypeptide of claim 27, wherein said first amino acid sequence is at least 95% identical to said second amino acid sequence.

29. The polypeptide of claim 28, wherein said first amino acid sequence is (b).

30. The polypeptide of claim 23, wherein said second amino acid sequence is (c).

31. The polypeptide of claim 30, wherein said first amino acid sequence is at least 95% identical to said second amino acid sequence.

32. The polypeptide of claim 31, wherein said first amino acid sequence is (c).

33. The polypeptide of claim 23, which binds to an antibody with specificity for a polypeptide consisting of amino acids -26 to 233 of SEQ ID NO:2.

34. The polypeptide of claim 23, which is produced by a recombinant host cell.

35. The polypeptide of claim 34, wherein said recombinant host cell is a eukaryotic host cell.

36. The polypeptide of claim 23, which comprises a heterologous polypeptide.

37. The polypeptide of claim 36, wherein said heterologous polypeptide comprises an Fc portion of an antibody.

38. A composition comprising the polypeptide of claim 23, and a carrier.

39. An isolated polypeptide comprising a first amino acid sequence at least 90% identical to a second amino acid sequence selected from the group consisting of:

(a) the amino acid sequence of a complete TNFR5 (Tumor Necrosis Factor Receptor-5) polypeptide encoded by the cDNA clone contained in ATCC Deposit No. 97798; and

(b) the amino acid sequence of a mature TNFR5 polypeptide encoded by the cDNA clone contained in ATCC Deposit No. 97798.

40. The polypeptide of claim 39, wherein said second amino acid sequence is (a).

41. The polypeptide of claim 40, wherein said first amino acid sequence is at least 95% identical to said second amino acid sequence.

42. The polypeptide of claim 41, wherein said first amino acid sequence is (a).
43. The polypeptide of claim 39, wherein said second amino acid sequence is (b).
44. The polypeptide of claim 43, wherein said first amino acid sequence is at least 95% identical to said second amino acid sequence.
45. The polypeptide of claim 44, wherein said first amino acid sequence is (b).
46. The polypeptide of claim 39, which binds to an antibody with specificity for a polypeptide consisting of amino acids -26 to 233 of SEQ ID NO:2.
47. The polypeptide of claim 39, which is produced by a recombinant host cell.
48. The polypeptide of claim 47, wherein said recombinant host cell is a eukaryotic host cell.
49. The polypeptide of claim 39, which comprises a heterologous polypeptide.
50. The polypeptide of claim 49, wherein said heterologous polypeptide comprises an Fc portion of an antibody.
51. A composition comprising the polypeptide of claim 39, and a carrier.

52. An isolated polypeptide comprising a first amino acid sequence at least 90% identical to a second amino acid sequence selected from the group consisting of:

- (a) amino acids m to 233 of SEQ ID NO:2, where m is an integer in the range of -26 to 27;
- (b) amino acids -26 to x of SEQ ID NO:2, where x is an integer in the range of 123 to 233; and
- (c) amino acids m to x of SEQ ID NO:2, m and x are defined in (a) and (b) above.

53. The polypeptide of claim 52, wherein said second amino acid sequence is (a).

54. The polypeptide of claim 53, wherein said first amino acid sequence is at least 95% identical to said second amino acid sequence.

55. The polypeptide of claim 54, wherein said first amino acid sequence is (a).

56. The polypeptide of claim 55 which comprises amino acids 27 to 233 of SEQ ID NO:2.

57. The polypeptide of claim 52, wherein said second amino acid sequence is (b).

58. The polypeptide of claim 57, wherein said first amino acid sequence is at least 95% identical to said second amino acid sequence.

59. The polypeptide of claim 58, wherein said first amino acid sequence is (b).

60. The polypeptide of claim 59, which comprises amino acids -26 to 123 of SEQ ID NO:2.

61. The polypeptide of claim 52, wherein said second amino acid sequence is (c).

62. The polypeptide of claim 61, wherein said first amino acid sequence is at least 95% identical to said second amino acid sequence.

63. The polypeptide of claim 62, wherein said first amino acid sequence is (c).

64. The polypeptide of claim 63, which comprises amino acids 27 to 123 of SEQ ID NO:2.

65. The polypeptide of claim 52, which binds to an antibody with specificity for a polypeptide consisting of amino acids -26 to 233 of SEQ ID NO:2.

66. The polypeptide of claim 52, which is produced by a recombinant host cell.

67. The polypeptide of claim 66, wherein said recombinant host cell is a eukaryotic host cell.

68. The polypeptide of claim 52, which comprises a heterologous polypeptide.
69. The polypeptide of claim 68, wherein said heterologous polypeptide comprises an Fc portion of an antibody.
70. A composition comprising the polypeptide of claim 52, and a carrier.
71. An isolated polypeptide comprising 30 contiguous amino acids from amino acid 1 to 233 of SEQ ID NO:2.
72. The polypeptide of claim 71 which comprises amino acids 1 to 214 of SEQ ID NO:2.
73. The polypeptide of claim 71 which comprises amino acids 215 to 233 of SEQ ID NO:2.
74. The polypeptide of claim 71 which comprises 50 contiguous amino acids from amino acids 1 to 233 of SEQ ID NO:2.
75. The polypeptide of claim 71, which binds to an antibody with specificity for a polypeptide consisting of amino acids -26 to 233 of SEQ ID NO:2.
76. The polypeptide of claim 71, which is produced by a recombinant host cell.

77. The polypeptide of claim 76, wherein said recombinant host cell is a eukaryotic host cell.

78. The polypeptide of claim 71, which comprises a heterologous polypeptide.

79. The polypeptide of claim 78, wherein said heterologous polypeptide comprises an Fc portion of an antibody.

80. A composition comprising the polypeptide of claim 71, and a carrier.

81. An isolated polypeptide comprising 50 contiguous amino acids from -26 to 233 of SEQ ID NO:2.

82. The polypeptide of claim 81, which binds to an antibody with specificity for a polypeptide consisting of amino acids -26 to 233 of SEQ ID NO:2.

83. The polypeptide of claim 81, which is produced by a recombinant host cell.

84. The polypeptide of claim 83, wherein said recombinant host cell is a eukaryotic host cell.

85. The polypeptide of claim 81, which comprises a heterologous polypeptide.

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86. The polypeptide of claim 85, wherein said heterologous polypeptide comprises an Fc portion of an antibody.

87. A composition comprising the polypeptide of claim 81, and a carrier.

88. An isolated polypeptide comprising an amino acid sequence selected from the group consisting of:

- (a) amino acids 42 to 50 of SEQ ID NO:2;
- (b) amino acids 53 to 59 of SEQ ID NO:2;
- (c) amino acids 65 to 76 of SEQ ID NO:2;
- (d) amino acids 84 to 96 of SEQ ID NO:2;
- (e) amino acids 100 to 110 of SEQ ID NO:2; and
- (f) amino acids 116 to 122 of SEQ ID NO:2.

89. The polypeptide of claim 88, wherein said amino acid sequence is (a).

90. The polypeptide of claim 88, wherein said amino acid sequence is (b).

91. The polypeptide of claim 88, wherein said amino acid sequence is (c).

92. The polypeptide of claim 88, wherein said amino acid sequence is (d).

93. The polypeptide of claim 88, wherein said amino acid sequence is (e).

94. The polypeptide of claim 88, wherein said amino acid sequence is (f).
95. The polypeptide of claim 88, which binds to an antibody with specificity for a polypeptide consisting of amino acids -26 to 233 of SEQ ID NO:2.
96. The polypeptide of claim 88, which is produced by a recombinant host cell.
97. The polypeptide of claim 96, wherein said recombinant host cell is a eukaryotic host cell.
98. The polypeptide of claim 88, which comprises a heterologous polypeptide.
99. The polypeptide of claim 98, wherein said heterologous polypeptide comprises an Fc portion of an antibody.
100. A composition comprising the polypeptide of claim 88, and a carrier.
101. An isolated polypeptide selected from the group consisting of :
- (a) an isolated polypeptide comprising 50 contiguous amino acids of the complete polypeptide encoded by the cDNA contained in ATCC Deposit No. 97798;
 - (b) an isolated polypeptide comprising 30 contiguous amino acids of the mature polypeptide encoded by the cDNA contained in ATCC Deposit No. 97798; and

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(c) an isolated polypeptide comprising at least 30 contiguous amino acids of the extracellular domain of the polypeptide encoded by the cDNA contained in ATCC Deposit No. 97798; and

(d) an isolated polypeptide comprising the transmembrane domain of the polypeptide encoded by the cDNA contained in ATCC Deposit No. 97798.

102. The polypeptide of claim 101, which comprises (a).

103. The polypeptide of claim 102, which comprises the complete polypeptide encoded by the cDNA contained in ATCC Deposit No. 97798.

104. The polypeptide of claim 101, which comprises (b).

105. The polypeptide of claim 104, which comprises at least 50 contiguous amino acids of the mature polypeptide encoded by the cDNA contained in ATCC Deposit No. 97798.

106. The polypeptide of claim 105, which comprises the mature polypeptide encoded by the cDNA contained in ATCC Deposit No. 97798.

107. The polypeptide of claim 101, which comprises (c).

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108. The polypeptide of claim 107, which comprises at least 50 contiguous amino acids of the extracellular domain of the polypeptide encoded by the cDNA contained in ATCC Deposit No. 97798.

109. The polypeptide of claim 108, which comprises the extracellular domain of the polypeptide encoded by the cDNA contained in ATCC Deposit No. 97798.

110. The polypeptide of claim 101, which comprises (d).

111. The polypeptide of claim 101, which binds to an antibody with specificity for a polypeptide consisting of amino acids -26 to 233 of SEQ ID NO:2.

112. The polypeptide of claim 101, which is produced by a recombinant host cell.

113. The polypeptide of claim 112, wherein said recombinant host cell is a eukaryotic host cell.

114. The polypeptide of claim 101, which comprises a heterologous polypeptide.

115. The polypeptide of claim 114, wherein said heterologous polypeptide comprises an Fc portion of an antibody.

116. A composition comprising the polypeptide of claim 101, and a carrier.--

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Remarks

Upon entry of the foregoing amendment, claims 23-116 are pending in the application, with claims 23, 39, 52, 71, 81, 88, and 101 being the independent claims. Support for added claims 23-116 may be found throughout the specification.

Except for priority data and minor amendments to make proper reference to the formal drawings submitted herewith, the specification submitted herewith is identical to the substitute specification which was submitted upon request of the Examiner in the parent Application No. 09/006,353 (the '353 Application). A copy of the specification and drawings *originally* submitted in the '353 application is attached, and is incorporated herein by reference.

A 36-page Sequence Listing is submitted herewith. A computer readable form of the Sequence Listing is also attached. In accordance with 37 C.F.R. § 1.821(f), the paper copy of the Sequence Listing and the computer readable copy of the Sequence Listing submitted herewith in the above-mentioned application are the same.

Applicants hereby state that no new matter has been added by way of the foregoing amendments.

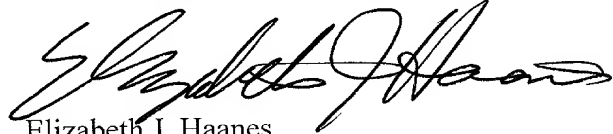
Summary

It is respectfully believed that this application is now in condition for examination. Early notice to this effect is respectfully requested

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

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